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Lin Hai

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EXAMINER

HOLLWEG, THOMAS A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,446	Applicant(s) HAI ET AL.	
	Examiner Thomas A. Hollweg	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgment of Amendment

1. Applicant's Amendment, received October 22, 2008, is acknowledged. No claims are canceled. Claim 35 is added. Claims 1-35 are currently pending.
2. Amendments to claims 33 and 34 are acknowledged. Objections to these claims are withdrawn.
3. Amendments to the specification are acknowledged. Objections to the specification are withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
6. The original disclosure does not describe an embodiment where the magnesium oxide crystal is oriented at random in the magnesium oxide layer.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6, 9-12, 14-19, 22-25, 28-29 and 31-34 are rejected under 35

U.S.C. 102(b) as being anticipated by Miyashita et al., Patent Abstracts of Japan No. 2002-150953.

9. With regard to claim 1, in figures 2 and 5, Miyashita discloses a plasma display panel equipped with a front substrate (11) and a back substrate (12) facing each other across a discharge space (22), and with, between the front substrate (11) and the back substrate (12), a plurality of row electrode pairs (13/14) and a plurality of column electrodes (17) extending in a direction intersecting the row electrode pairs (13/14) to form unit light emitting areas in the respective portions of the discharge space (22) corresponding to the intersections with the row electrode pairs (13/14), comprising: on an area facing the unit light emitting area between the front substrate (11) and the back substrate (12), a magnesium oxide layer (16) that includes a magnesium oxide crystal [0030-0037, 0045-0056]. Based on the size and configuration of the magnesium oxide crystals disclosed by Miyashita, the magnesium oxide layer of would be capable of emitting a cathode-luminescence emission having a peak within a wavelength range of 200 nm to 300 nm upon being excited by electron beams.

10. With regard to claim 2, in figures 2 and 5, Miyashita discloses that the magnesium oxide crystal (161) comprising a magnesium oxide single crystal [0045-0056].

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11. The Examiner notes that the claim limitation “produced by a vapor-phase oxidation technique” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation has been considered, but not patentably distinct over Miyashita (see MPEP 2113).

12. With regard to claim 3, based on the size and configuration of the magnesium oxide crystals disclosed by Miyashita, the magnesium oxide crystal is capable of emitting cathode-luminescence emission having a peak within a range from 230 nm to 250 nm.

13. With regard to claim 4, in figures 1 and 5, Miyashita discloses that the magnesium oxide crystal (161) has a particle diameter of 2000 or more angstroms [0045-0056].

14. With regard to claim 5, in figures 1 and 5, Miyashita discloses that the magnesium oxide layer (16) is formed on a dielectric layer (15) covering the row electrode pairs (13/14) [0030-0037].

15. With regard to claim 6, in figures 1 and 5, Miyashita discloses that the unit light emitting area is divided into a first light emitting area (bottom of cell) for causing light emission for forming an image and a second light emitting area (top of cell) for initiating a discharge for selecting the first light emitting area (bottom of cell) to cause the light emission for forming the image, and the magnesium oxide layer (15) is provided in an

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area facing the second light emitting area (top of cell) of the unit light emitting area [0030-0037].

16. With regard to claim 9, in figures 1 and 5, Miyashita discloses that the magnesium oxide single crystal (161) has a particle diameter of 500 or more angstroms [0045-0056].

17. With regard to claim 10, in figures 1 and 5, Miyashita discloses that the magnesium oxide single crystal (161) has a particle diameter of 2000 or more angstroms [0045-0056].

18. With regard to claim 11, in figures 1 and 5, Miyashita discloses that the plasma display panel comprises a dielectric layer (15) covering either the row electrode pairs (13/14) or the column electrodes (17), and a protective layer (16) covering the dielectric layer (15), wherein the magnesium oxide layer (16), which includes the magnesium oxide crystal (161) capable of emitting a cathode-luminescence emission having a peak within a wavelength range of 200 nm to 300 nm upon being excited by electron beams, constitutes the protective layer of a lamination structure, together with a thin-film magnesium oxide layer (163) [0030-0037, 0045-0056].

19. The Examiner notes that the claim limitation “formed by vapor deposition or sputtering” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-

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process claim limitation has been considered, but not patentably distinct over Miyashita (see MPEP 2113).

20. With regard to claim 12, in figures 2 and 5, Miyashita discloses that the thin-film magnesium oxide layer (163) is formed on the dielectric layer (15), and the magnesium oxide layer including the magnesium oxide crystal (161) is formed on the thin-film magnesium oxide layer (163) [0030-0037, 0045-0056].

21. With regard to claim 14, in figures 2 and 5, Miyashita discloses that the magnesium oxide layer (16) including the magnesium oxide crystal (161) and the thin-film magnesium oxide layer (163) are individually formed on the entire surface of the dielectric layer (15) [0030-0037, 0045-0056].

22. With regard to claim 15, in figures 2 and 5, Miyashita discloses that the thin-film magnesium oxide layer (163) is formed on the entire surface of the dielectric layer (15), and the magnesium oxide layer including the magnesium oxide crystal (161) is formed in a position opposite to a part of the surface of the dielectric layer (15) [0030-0037, 0045-0056].

23. With regard to claim 16, in figures 2 and 5, Miyashita discloses that the magnesium oxide layer including the magnesium oxide crystal (161) is formed on a portion facing either the row electrode pair (13/14) or the column electrode (17) [0030-0037, 0045-0056].

24. With regard to claim 17, in figures 2 and 5, Miyashita discloses that the magnesium oxide layer including the magnesium oxide crystal (161) is formed on a

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portion excepting a portion facing either the row electrode pair (13/14) or the column electrode (17) [0030-0037, 0045-0056].

25. With regard to claim 18, in figures 2, 5 and 6a-e, Miyashita discloses a method of manufacturing a plasma display panel equipped with a front substrate (11) and a back substrate (12) facing each other across a discharge space (22), electrodes (13/14, 17) formed on at least one of the front (11) and back (17) substrates, a dielectric layer (15) covering the electrodes (13/14), and a protective layer (16) covering the dielectric layer (15), comprising: a process of forming a magnesium oxide layer (16) that includes a magnesium oxide crystal (161) in a position covering a required portion of the dielectric layer (15) [0030-0037, 0045-0056]. Based on the size and configuration of the magnesium oxide crystals disclosed by Miyashita, the magnesium oxide layer of would be capable of emitting a cathode-luminescence emission having a peak within a wavelength range of 200 nm to 300 nm upon being excited by electron beams.

26. With regard to claim 19, in figures 2, 5 and 6a-e, Miyashita discloses that in forming the magnesium oxide (16), a coating of a paste including the magnesium oxide crystal is applied to a required portion of the dielectric layer (15) to form the magnesium oxide layer (16) [0062].

27. With regard to claim 22, based on the size and configuration of the magnesium oxide crystals disclosed by Miyashita, the magnesium oxide crystal would be capable of emitting a cathode-luminescence emission having a peak within a range from 230 nm to 250 nm.

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28. With regard to claim 23, in figures 2, 5, and 6a-e, Miyashita discloses that the magnesium oxide crystal (161) has a particle diameter of 2000 or more angstroms [0045-0056].

29. With regard to claim 28, in figures 2, 5 and 6a-e, Miyashita discloses that, in forming the protective layer (16), the process of forming the magnesium oxide layer (161) is performed together with a process of forming a thin-film magnesium oxide layer (163) by vapor deposition or sputtering to form the protective layer (16) of a lamination structure made up of the thin-film magnesium oxide layer (163) and the magnesium oxide layer including the magnesium oxide crystal (161) [0045-0056, 0060-0062].

30. With regard to claim 29, in figures 2, 5 and 6a-e, Miyashita discloses that after forming the thin-film magnesium oxide layer (163) has been performed, the process of forming the magnesium oxide layer including the magnesium oxide crystal (161) is performed [0045-0056, 0060-0062].

31. With regard to claim 31, in figures 2, 5 and 6a-e, Miyashita discloses that in forming the protective layer (16), the magnesium oxide layer including the magnesium oxide crystal (161) and the thin-film magnesium oxide layer (163) are individually formed on the entire surface of the dielectric layer (15) [0045-0056, 0060-0062].

32. With regard to claim 32, in figures 2, 5 and 6a-e, Miyashita discloses that in the process of forming the thin-film magnesium oxide layer (163), the thin-film magnesium oxide layer (163) is formed on the entire surface of the dielectric layer (15), and in forming the magnesium oxide layer including the magnesium oxide crystal (161), the magnesium oxide layer including the magnesium oxide crystal (161) is formed in a

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position opposite to a part of the surface of the dielectric layer (15) [0045-0056, 0060-0062].

33. With regard to claim 33, in figures 2, 5 and 6a-e, Miyashita discloses that in forming the magnesium oxide layer (16) including the magnesium oxide crystal (161), the magnesium oxide layer including the magnesium oxide crystal (161) is formed on a portion facing the electrode (13/14) [0045-0056, 0060-0062].

34. With regard to claim 34, in figures 2, 5 and 6a-e, Miyashita discloses that in forming the magnesium oxide layer including the magnesium oxide crystal (161), the magnesium oxide layer including the magnesium oxide crystal (161) is formed on a portion excepting a portion facing the electrode (17) [0045-0056, 0060-0062].

35. With regard to claim 35, in figures 2 and 5, Miyashita discloses that the magnesium oxide crystal is oriented at random in the magnesium oxide layer [0045-0056].

Claim Rejections - 35 USC § 103

36. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

37. Claims 7, 8, 13, 24, 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita as applied to claims 1, 2, 11, 18, 21 and 28 above, in view of itself.

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38. With regard to claim 7, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide single crystal has a cubic single crystal structure.

39. One having ordinary skill in the art would understand that using the methods of formation disclosed by Miyashita, single crystals having a cubic single-crystal can be formed by controlling the formation conditions [0060-0062]. These configurations would be obvious to try so that the resulting crystals had a greater diameter, so as to have excellent anti-sputtering property and a stable discharge characteristic [0060].

40. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP where the magnesium oxide single crystal comprises a magnesium oxide single crystal having a cubic single-crystal structure, so they have excellent anti-sputtering property and a stable discharge characteristic, as taught by Miyashita [0060].

41. With regard to claim 8, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide single crystal has a cubic polycrystal structure.

42. One having ordinary skill in the art would understand that using the methods of formation disclosed by Miyashita, single crystals having a cubic polycrystal can be formed by controlling the formation conditions [0060-0062]. These configurations would be obvious to try so that the resulting crystals had a greater diameter, so as to have excellent anti-sputtering property and a stable discharge characteristic [0060].

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43. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP where the magnesium oxide single crystal comprises a magnesium oxide polycrystal having a cubic single-crystal structure, so they have excellent anti-sputtering property and a stable discharge characteristic, as taught by Miyashita [0060].

44. With regard to claim 13, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide layer including the magnesium oxide crystal is formed on the dielectric layer, and the thin-film magnesium oxide layer is formed on the magnesium oxide layer including the magnesium oxide crystal. The disclosed PDP has the magnesium oxide layer including the magnesium oxide crystal formed on the thin-film magnesium oxide layer.

45. One having ordinary skill in the art would understand that the protective layer can be configured with either the thin-film formed on the dielectric layer or the magnesium oxide crystal layer formed on the dielectric layer, because with either configuration, the protective layer comprising MgO would have excellent electron emission and anti-sputtering properties [0010, 0060].

46. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP where the magnesium oxide layer including the magnesium oxide crystal is formed on the dielectric layer, and the thin-film magnesium oxide layer is formed on the magnesium oxide layer including the magnesium oxide crystal, because this configuration would provide excellent electron emission and anti-sputtering properties, as taught by Miyashita [0010, 0060].

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47. With regard to claim 24, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide single crystal has a cubic single crystal structure.

48. One having ordinary skill in the art would understand that using the methods of formation disclosed by Miyashita, single crystals having a cubic single-crystal can be formed by controlling the formation conditions [0060-0062]. These configurations would be obvious to try so that the resulting crystals had a greater diameter, so as to have excellent anti-sputtering property and a stable discharge characteristic [0060].

49. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP with a method where the magnesium oxide single crystal comprises a magnesium oxide single crystal having a cubic single-crystal structure, so they have excellent anti-sputtering property and a stable discharge characteristic, as taught by Miyashita [0060].

50. With regard to claim 25, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide single crystal has a cubic polycrystal structure.

51. One having ordinary skill in the art would understand that using the methods of formation disclosed by Miyashita, single crystals having a cubic polycrystal can be formed by controlling the formation conditions [0060-0062]. These configurations would be obvious to try so that the resulting crystals had a greater diameter, so as to have excellent anti-sputtering property and a stable discharge characteristic [0060].

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52. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP with a method where the magnesium oxide single crystal comprises a magnesium oxide polycrystal having a cubic single-crystal structure, so they have excellent anti-sputtering property and a stable discharge characteristic, as taught by Miyashita [0060].

53. With regard to claim 30, Miyashita discloses all of the limitations, except it does not expressly disclose that after forming the magnesium oxide layer including the magnesium oxide crystal is performed, forming the thin-film magnesium oxide layer is performed. The disclosed PDP has the magnesium oxide layer including the magnesium oxide crystal formed on the thin-film magnesium oxide layer.

54. One having ordinary skill in the art would understand that the protective layer can be configured with either the thin-film formed on the dielectric layer or the magnesium oxide crystal layer formed on the dielectric layer, because with either configuration, the protective layer comprising MgO would have excellent electron emission and anti-sputtering properties [0010, 0060].

55. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP with a method where after forming the magnesium oxide layer including the magnesium oxide crystal is performed, forming the thin-film magnesium oxide layer is performed, because this method would result in a protective layer having excellent electron emission and anti-sputtering properties, as taught by Miyashita [0010, 0060].

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56. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita as applied to claim 18 above, in view of Sakurai et al., U.S. Patent No. 6,821,616 B1.

57. With regard to claim 20, Miyashita discloses all of the limitations, as discussed in the rejection of claim 18, except it does not expressly disclose that in forming the magnesium oxide, a powder of the magnesium oxide crystal is sprayed and deposited on the dielectric layer to form the magnesium oxide layer.

58. Sakurai teaches a MgO protective layer for a PDP and a method of forming the MgO layer where a powder of the magnesium oxide crystal is sprayed and deposited on the dielectric layer to form the magnesium oxide layer (col. 1, lines 15-25).

59. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP where in forming the magnesium oxide, a powder of the magnesium oxide crystal is sprayed and deposited on the dielectric layer to form the magnesium oxide layer, because it is a well known and reliable method for forming a protective layer.

60. Claims 21, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita as applied to claim 18 above, in view of Bocko et al., U.S. Patent No. 4,604,118.

61. With regard to claim 21, Miyashita discloses all of the limitations, except it does not expressly disclose that the magnesium oxide crystal comprises a magnesium oxide single crystal produced by a vapor-phase oxidation technique.

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62. Bocko teaches a method of producing magnesium oxide single crystal by a vapor-phase oxidation technique (col. 2, lines 8-21). At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Miyashita PDP where the magnesium oxide crystal comprises a magnesium oxide single crystal produced by a vapor-phase oxidation technique, as taught by Bocko, because crystals formed with this method will be generally free from impurities (col. 2, lines 49-54).

63. With regard to claim 26, in figures 2, 5, and 6a-e, Miyashita discloses that the magnesium oxide single crystal (161) has a particle diameter of 500 or more angstroms [0045-0056].

64. With regard to claim 27, in figures 2, 5, and 6a-e, Miyashita discloses that the magnesium oxide single crystal (161) has a particle diameter of 2000 or more angstroms [0045-0056].

Response to Arguments

65. Applicant argues that the limitation "a magnesium oxide crystal capable of emitting a cathode-luminescence emission having a peak within a wavelength range of 200nm to 300nm upon being excited by electron beams" Recites a physical property of the magnesium crystal. The examiner has fully considered this argument and has found it convincing.

66. Applicant further argues that the prior art of record, Miyashita, does not anticipate applicant's claimed invention because the MgO layer in Miyashita cannot emit a CL emission having a peak within a wavelength range of 200 nm to 300 nm upon excitation by an electron beam. In support of this argument applicant has submitted a Declaration

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under 37 C.F.R. 1.132 presenting the results of experiments conducted by applicant where the MgO layer was deposited by vacuum evaporation (vapor deposition), shown in figure A, chemical vapor deposition and physical vapor deposition, shown in figure E. Applicant states that the results shown in figure A are from an experiment using vapor deposition, as taught by Miyashita.

67. However, a close reading of Miyashita reveals that the vapor deposition technique of depositing the MgO layer is identified by Miyashita as the prior art method which the Miyashita invention seeks to improve upon (Miyashita [0041-0044, figure 4). Applicant's declaration does not discuss results obtained by practicing Miyashita's invention, where the MgO layer is formed by a multi-step process, shown in figures 5 and 6. Therefore, applicant's declaration does not support the argument that the MgO layer in Miyashita cannot emit a CL emission having a peak within a wavelength range of 200 nm to 300 nm upon excitation by an electron beam.

68. Applicant's claim 1 claims applicant's invention in terms of a performance characteristic which, as applicant successfully argues, implies certain physical properties of the MgO layer. The properties that cause this performance characteristic are both the single crystal nature of the MgO layer and the particle diameter of the MgO crystals, as explained in applicant's specification [0061-0062].

69. The MgO layer disclosed by Miyashita has both a single crystal nature and larger particle diameter than that of the prior art (Miyashita [0045-0056]. Because the MgO layer in Miyashita has the same physical properties as the claimed MgO layer, it would also have the same performance characteristics, as explained above. This conclusion is

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more than merely an unsupported opinion by the examiner, because it is based on the disclosure by Miyashita, and on the explanation provided by the applicant about how the applicant's invention achieves its performance characteristics.

Conclusion

70. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

71. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

72. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Hollweg whose telephone number is (571) 270-1739. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm E.S.T..

73. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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74. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TH/

/NIMESHKUMAR D. PATEL/

Supervisory Patent Examiner, Art Unit 2879